WATER UTILITY ENTERPRISE REPORT

Final

July 1999

Santa Clara Valley Water District

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AN EQUAL OPPORTUNITY EMPLOYER

July 30, 1999

Dear Board Members:

This 1999 Water Utility Enterprise Report summarizes the results of the water rate hearings held in April and May 1999 and presents the water rates adopted for fiscal year 1999-2000. The data in this report are the basis for the adopted fiscal year 1999-2000 water rates; the report also presents the financial and water supply information required by the Santa Clara Valley Water District Act.

The Water Utility's adopted rates for 1999-2000 fully support the cost of providing Santa Clara County's (County) water supply and continue to address challenges to the quality of the County's drinking water. In the coming fiscal year, the Water Utility will continue the design and construction work on the Water Treatment Improvement Project to enhance the reliability and safety of drinking water delivered from the District's three water treatment plants. As the State of California and the Federal government move to eliminate MTBE from gasoline in California, the District continues to assess the threat to local surface and groundwater supplies from MTBE in existing gasoline stocks. In order to enhance the reliability and quality of the County's state and federal water supplies, the District continues to provide leadership at the state level in the joint state-federal CALFED program.

In an effort to ensure that the Water Utility is efficiently run and accountable to its customers, the Water Utility participated in the American Water Works Association's QualServe™ utility evaluation program in 1998 and will be the subject of a Board initiated performance audit in 1999.

The rates adopted for 1999-2000 are consistent with the increases anticipated in 1998's projected rates for 1999-2000. Rates for agricultural water are again set at ten percent of the non-agricultural water rate in each zone. The North County Municipal and Industrial rate for groundwater increased by ten percent from $260 per acre-foot to $285 per acre-foot The South County Municipal and Industrial rate increased by 6.5% from $108 per acre-foot to $115 per acre-foot, to cover the costs of water purchases and other operations. Corresponding rates for agricultural water are $28 50 per acre-foot in the North County and $11.50 per acre-foot in the South County.

The surcharge on treated water scheduled for delivery under the contracts with retail agencies remains at $70 per acre-foot. In July 1998, the Board lowered the surcharge to $0 for treated water delivered in excess of scheduled contract amounts from Rinconada Water Treatment Plant only. The surcharge rates for contract and noncontract treated water will remain constant for 1999-2000. The contract rate for treated water is $355 per acre-foot.

The following report includes historical data on District water supply and demand, describes the benefits of the District's activities, and provides financial projections for the next ten years.

Sincerely,

Stanley M. Williams
General Manager

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SANTA CLARA VALLEY WATER DISTRICT

WATER UTILITY ENTERPRISE REPORT

FINAL

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JULY 1999

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PREFACE

This is the 28th annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District's Act, the District annually prepares a written report on the District's activities on the protection and augmentation of the water supplies of the District. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water.

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I. ADOPTED WATER RATES FOR 1999–2000

INTRODUCTION

The District is the water resource management agency providing a safe and reliable water supply to the County's nearly 1.7 million residents. The District's Water Utility budget and rate strategy for 1999-2000 are designed to provide revenues to pay the full cost of the County's water supply and to address challenges to the quality of the County's drinking water.

The adopted rate described below are necessary for the Water Utility to provide a reliable water supply in the face of two major cost issues:

- Continued high quality and safety of water delivered from the District's three water treatment plants
- Costs of imported water and contract negotiations with the Federal Central Valley Water Project

Other uncertainties such as combating Methyl tert-Butyl Ether (MTBE) in County water supplies, costs to implement proposed solutions to Bay-Delta water quality problems and the District's role in providing recycled water to the County will continue to pose operating and financial challenges as this century comes to a close.

This section summarizes Water Utility rates adopted for 1999-2000. Details of the rate components and other charges are presented in Appendix A. Section II presents data on the County's water supply and water usage. Section III describes water supply and quality challenges facing the Water Utility and the benefits of District activities to address them. Section IV discusses the revenue required to meet needs in fiscal year 1999-2000 and provides the financial analysis for the two water charge zones. Also included in this last section is a projection of the Water Utility finances over the next 10 years.

ADOPTED WATER RATES FOR 1999-2000

In 1998, the District conducted an extensive analysis of the long-term capital and operating needs of the Water Utility and prepared a 10-year projection of the water rates and revenue bond financing that would be necessary to provide a reliable, high-quality water supply to the County. Alternative rate projections were discussed extensively with the water retailers, and a decision was reached to begin a series of rate increases, expected to lead to rates 50 percent above the 1998 level within the next 10 years.

District staff has updated its analyses of the Water Utility's financial outlook this year and has concluded that the capital and operating needs are consistent with the analyses made in 1998. Therefore, the Board has decided to continue to implement incremental rate increases, as projected last year. Appendix B presents descriptions of the Water Utility revenue sources, cost centers, and reserves.

Table 1-1 shows the water rates in effect for fiscal years 1994-95 through 1998-99 and the adopted rates for fiscal year 1999-2000.

In 1998-99, the rates for North County, Water Charge Zone W-2, were increased for the first time since July 1991 for municipal and industrial (M&I) water. The South County, Water Charge Zone W-5, M&I rate did not change last year (the boundaries of Zones W-2 and W-5 are shown on the Water Utility

Zones map in Appendix C). As shown in Table 1-1, the groundwater charge for M&I water in the North County was raised by $20 per acre-foot to $260 per acre-foot for the current fiscal year. The Board has decided to continue along the path of rate increases projected last year and increase the groundwater charge for M&I water in the North County to $285 per acre-foot.

For South County, the Board has decided to continue along the path of rate increases projected last year and increase the groundwater charge for M&I water to $115 per acre-foot. This represents the first rate increase for South County since 1991.

Consistent with Board Policy, the adopted rates for agricultural water are 10 percent of the M&I rates in each of the zones.

The surcharge on treated water delivered under the contracts with retail agencies will remain at $70 per acre-foot. The District has the discretion to allow water retailers to purchase treated water in excess of their basic contract amounts, so-called noncontract treated water, when supplies are ample. The amount of the surcharge on noncontract water determines the economics of choosing to pump groundwater rather than purchasing treated water. In July 1998, the Board lowered the noncontract surcharge from $20 per acre-foot to $0 to encourage the use of treated water from the Rinconada Water Treatment Plant. In fiscal year 1999-2000, the District will continue the $0 per acre-foot surcharge on noncontract water from the Rinconada Water Treatment Plant. The District's objective is to reduce groundwater use on the west side of the Santa Clara Valley basin where groundwater levels are low compared to other areas of the Santa Clara Valley basin.

TABLE 1-1
Summary of Water Charges
(Dollars Per Acre-Foot)

	1994–95	1995–96	1996–97	1997–98	1998–99	Adopted 1999–00
Zone W-2						
M&I	240.00	240.00	240.00	240.00	260.00	285.00
Agricultural	43.75	43.75	43.75	43.75	26.00	28.50
Treated Water Surcharge Contract	70.00	70.00	70.00	70.00	70.00	70.00
Noncontract (See Note)	50.00	50.00	30.00	20.00	0.00	0.00
Zone W-5						
M&I	108.00	108.00	108.00	108.00	108.00	115.00
Agricultural	11.50	11.50	11.50	11.50	10.80	11.50

Note: Noncontract water will be available only from the Rinconada Water Treatment Plant in 1999-00.

II. SANTA CLARA COUNTY
WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or municipal and industrial (M&I). Recorded fiscal year North County water use since 1964-65 and South County water use since 1987-88 (when the District merged with Gavilan Water Conservation District) is shown in Figure 1. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Water use in North County, as shown in Figure 2-1, is predominantly M&I. Current projections indicate an increase in M&I use through 2020, when the total North County annual water use is projected to be 393,000 acre-feet. Agricultural water use is expected to range between 3,000 and 4,000 acre-feet per year through the year 2020 in North County. This amounts to about 1 percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to remain between 30,000 acre-feet and 35,000 acre-feet (see Figure 2-2). The latest projections for South County anticipate total water use of about 93,000 acre-feet per year by the year 2020. M&I and agricultural water uses are projected to be 58,000 acre-feet and 35,000 acre-feet per year, respectively.

The projected water usage for the County discussed above totals 489,000 acre-feet in 2020. This represents the likely outcome of many factors, including population trends, employment growth, water conservation practices, and plumbing code changes. Alternative circumstances could lead to total County water needs ranging from as low as 350,000 acre-feet to as high as 500,000 acre-feet in 2020. The lower end of this range is based on a projection of 1991 water use data, which reflects drought and recession-related behaviors. The higher end is based on predrought patterns of water use and a strong local economy.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems map in Appendix C).

Sources of water supply in North County consist of locally developed water and water imported via the State Water Project, the Federal Central Valley Project (CVP) or San Felipe Division, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water and CVP water imported via the San Felipe Division. The recorded water supply in North County since 1964-65 is shown in Figure 2-3, and South County since 1987-88 is shown in Figure 2-4.

FIGURE 2-1
Santa Clara County Water Use
North Zone W-2

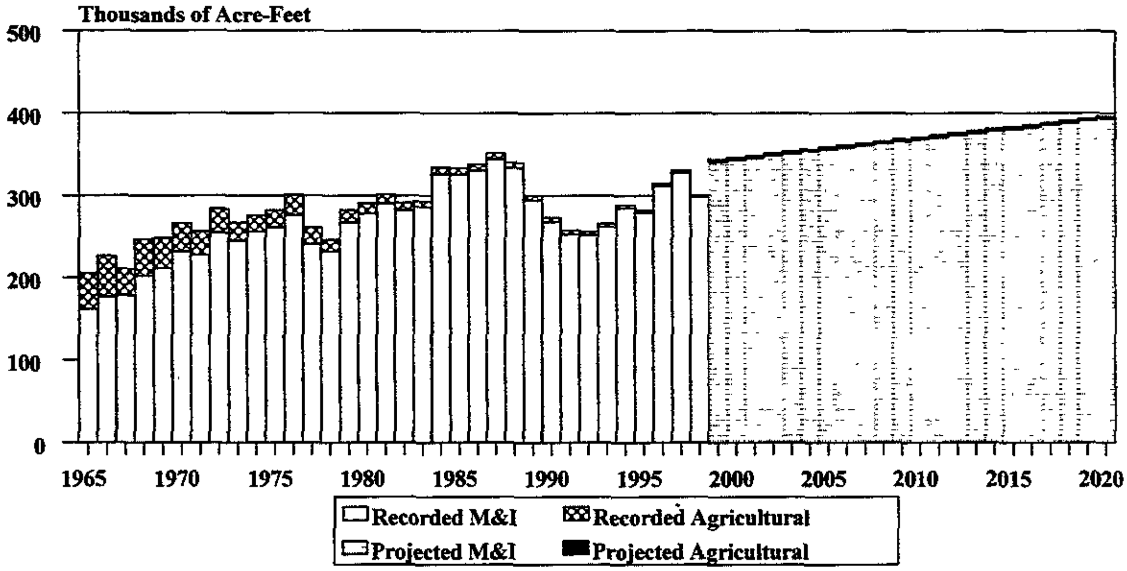


FIGURE 2-2
South Santa Clara County Water Use
South Zone W-5

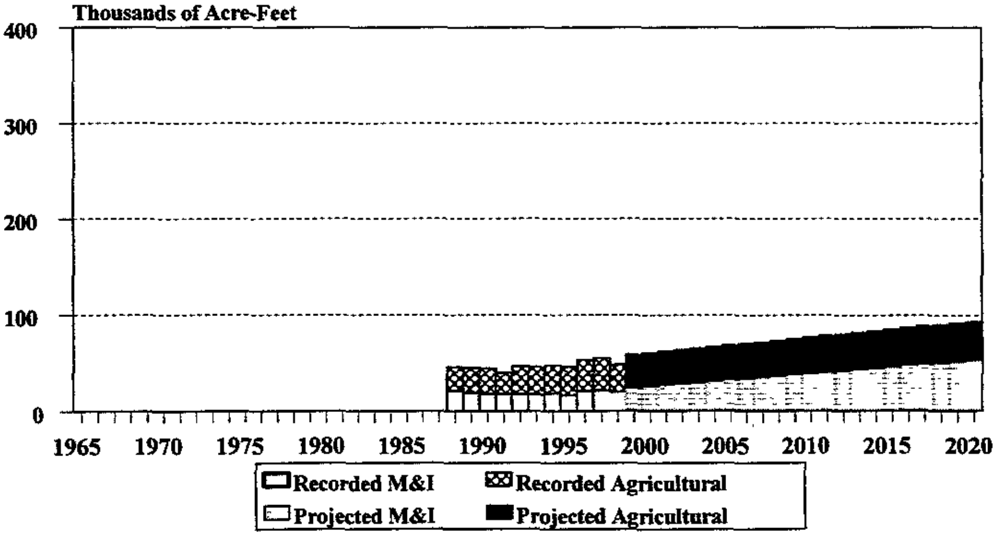


FIGURE 2-3
Santa Clara County Water Supply
North Zone W-2

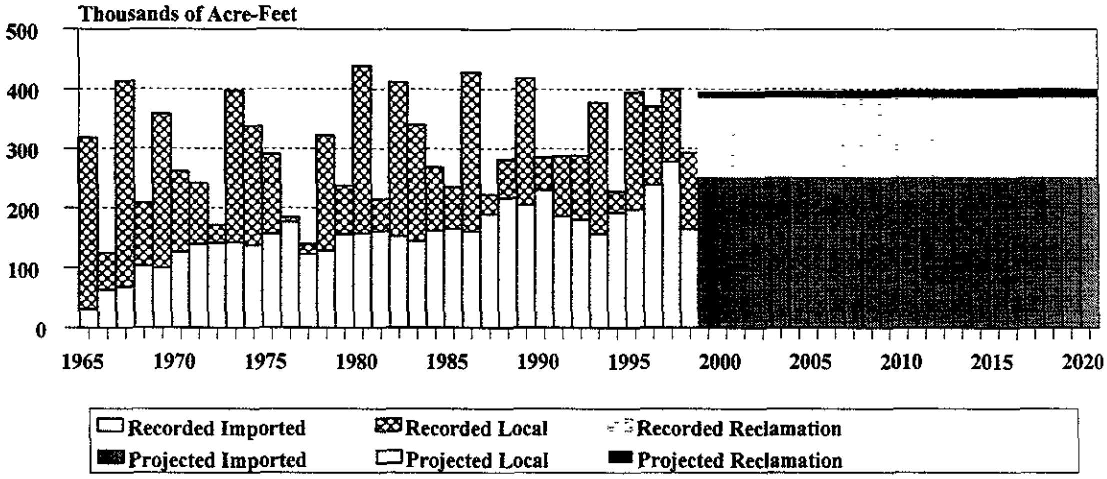
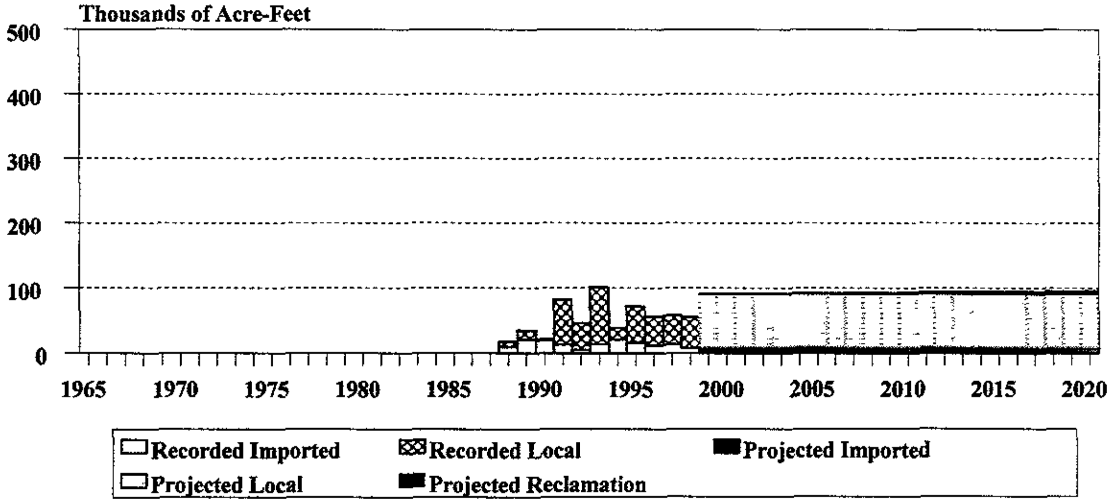


FIGURE 2-4
Santa Clara County Water Supply
South Zone W-5



In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. The District is providing financial contributions to wastewater agencies for delivery of recycled water for nonpotable uses. Future local supplies are projected to be augmented by nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act. These activities are more fully described in Section III, Benefits and Services Provided by the District.

DISTRICT WATER SUPPLIES AND DEMANDS

The following segment documents calendar year activities for 1997 and 1998 and presents the plan for calendar year 1999 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. *Table 2-1 summarizes water demands recorded and projected in the County* for calendar years 1997, 1998, and 1999. Table 2-2 documents District and non-District annual water supply and distribution management activities, and Table 2-3 summarizes District out-of-county water banking activities for those 3 years. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage.

TABLE 2-1
Water Demands For Calendar Years 1997 Through 1999
Santa Clara County

Water Demand	Actual 1997	Estimated 1998	Projected 1999
I. WATER PRODUCTION			
In-District Groundwater Pumping	174,900	146,100	171,900
District Treated Water Delivery	132,400	122,000	124,900
District Surface Water Delivery	2,500	2,400	2,400
Non-District (Import and Local)	80,300	82,900	81,500
TOTAL WATER PRODUCTION	**390,100**	**353,400**	**380,700**
II. WATER USE			
District M&I	273,800	242,300	266,600
District Agricultural	36,000	28,200	32,600
Non-District (Import and Local)	80,300	82,900	81,500
TOTAL WATER USE	**390,100**	**353,400**	**380,700**

TABLE 2-2
Annual Water Supply and Distribution For Calendar Years 1997 Through 1999
Santa Clara County

Water Supply	Actual 1997	Estimated 1998	Projected 1999
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water to County			
CVP Imports	91,350	78,680	103,800
State Water Project Imports	60,600	39,600	53,000
Total Water Imported to County	151,950	118,280	156,800
Local Surface Water	100,095	107,910	77,800
Other Supplies			
Hetch Hetchy	63,100	54,100	59,400
Other Reservoirs and Streams (San Jose/Stanford)	15,800	27,400	20,700
Recycled Water	1,400	1,400	1,400
TOTAL	332,345	309,090	316,100
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	134,695	123,460	130,000
To Surface Water and Irrigation	7,190	9,930	13,200
To Managed Recharge	110,160	92,800	91,400
Santa Clara Groundwater Subbasin	63,520	66,670	67,000
Coyote & Llagas Groundwater Subbasins	46,640	26,130	24,400
Subtotal of Distribution to District System	**252,045**	**226,190**	**234,600**
Distribution by Others			
Hetch Hetchy	63,100	54,100	59,400
San Jose/Stanford	15,800	27,400	20,700
Recycled Water	1,400	1,400	1,400
Subtotal of Distribution by Others	**80,300**	**82,900**	**81,500**
TOTAL	332,345	309,090	316,100

Recorded Operation for Calendar Year 1997

In 1997, the total water use in the County was 390,100 acre-feet. This included 273,800 acre-feet of M&I and 36,000 acre-feet of agricultural use. It also included 80,300 acre-feet used in the County by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 174,900 acre-feet were provided through groundwater pumping and 132,400 acre-feet were delivered from our three water treatment plants. In addition, 2,500 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

To meet this demand, the District imported approximately 152,000 acre-feet of water from the State and Federal Water Projects, and released approximately 100,000 acre-feet of locally-conserved water from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with carryover storage or natural recharge in local groundwater basins. Table 2-2 shows how the water supply was managed and distributed in 1997.

Recorded Operation for Calendar Year 1998

In 1998, the total water use in the County was 353,400 acre-feet. Following the wet El Niño winter, the water use was understandably lower than the previous year. Rainfall in the 1997-98 season totaled 25 inches in downtown San Jose, about 176 percent of average. Total water use included 242,300 acre-feet of M&I and 28,200 acre-feet of agricultural water. It also included 82,900 acre-feet used in the County by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 146,100 acre-feet were provided through groundwater pumping and 122,000 acre-feet were delivered from our three water treatment plants. In addition, 2,400 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

To meet this demand, the District imported approximately 118,300 acre-feet of water from the State and Federal Water Projects, and released approximately 88,800 acre-feet from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with local recharge or carryover storage from our groundwater basins. Table 2-2 presents a preliminary estimate of how the water supply was managed and distributed in 1998.

Projected Operation Plan for Calendar Year 1999

The objectives of the 1999 Operating Plan include efficient utilization of recharge facilities, providing treated water deliveries to meet demands and utilization of water supplies from alternate sources to minimize costs. The plan also balances other objectives such as flood control, recreation, environmental stewardship, and public safety. The 1999 Operating Plan projects the District will use 77,800 acre-feet of locally-conserved water, and import 156,800 acre-feet, for a total of 234,600 acre-feet in 1999. It is projected that 91,400 acre-feet will be distributed to the District's groundwater recharge facilities. Treated water production is projected to total 130,000 acre-feet in 1999.

Going into the summer season, the District is well prepared to meet projected demands on District water of approximately 300,000 for the coming year. As of the end of June 1999, the ten District reservoirs had a combined carryover storage of approximately 136,000 acre-feet, which is about 79 percent of capacity. Rainfall was approximately 80 percent of average for the season, which ended June 30. In 1999, 100 percent of the State Water Project entitlement of 100,000 acre-feet is available to the District. The CVP has indicated that possibly only 75 percent of the M&I and agricultural entitlements of our 152,500 acre-feet entitlement will be available in 1999.

The groundwater basin management strategy is to maximize in-county storage where the depths to water levels are below operational storage limits. To achieve this goal, the Board lowered the surcharge on treated water provided in excess of scheduled contract amounts to $0 per acre-foot at Rinconada Water Treatment Plant. This will continue to provide an incentive to use treated water in lieu of pumping from wells on the west side of the Santa Clara subbasin. This reduction in the noncontract surcharge will remain in effect in 1999.

The District plans controlled releases of 77,800 acre-feet from District reservoirs in 1999. The 1999 operations plan includes delivery of 130,000 acre-feet of treated water, as well as 91,400 acre-feet to groundwater recharge and 13,200 acre-feet to surface water users and irrigation. The remainder of the projected demand on District water will be met from natural recharge and carryover storage of the groundwater basins. Table 2-2 provides details for the preliminary operations plan for 1999.

Banking and Reallocations

To provide reliability in future dry years, the District banks water in storage outside of the County. Primarily, the District banks State Water Project water at the Semitropic Water Storage District. We also have 2,000 acre-feet stored at the San Justo Reservoir in San Benito County. In 1998, the District increased its total banked amount to approximately 100,000 acre-feet. We anticipate increasing our total out-of-county banked storage to 126,000 acre-feet by the end of 1999. Table 2-3 shows the distribution of banked water during calendar years 1997 through 1999.

To further increase reliability against future drought, the District initiated a Water Reallocation Agreement with the Westlands Water District and the San Luis Water District. Under this agreement, the District will reallocate 100,000 acre-feet of CVP water over the 10-year agreement period. In return, the District can use the Westlands and San Luis allocations to supplement our water supplies in years when CVP entitlements are less than 75 percent. We expect to reallocate 20,000 acre-feet in 1999 for a cumulative total of 75,000 acre-feet after the first 3 years of the 10-year agreement period.

On a yearly basis, the District exchanges CVP allocations with San Benito County, typically amounting to an exchange of 14,000 to 15,000 acre-feet of water. The District accepts CVP water in the early part of the calendar year, when we can store it, and in turn exchanges allocations so that San Benito County can purchase CVP water during the summer months. This agreement benefits both counties by allowing for flexibility in the timing of accepting CVP water.

TABLE 2-3
District Water Banking For Calendar Years 1997 Through 1999

Water Banking	Actual 1997	Estimated 1998	Projected 1999
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	45,000	77,000	98,800
Change in Storage—Bank Deposit or Withdrawal	35,000	23,800	28,000
Transaction Losses	–3,000	–2,000	–3,000
Ending Balance (December 31)	**77,000**	**98,800**	**123,800**
SAN BENITO COUNTY—SAN JUSTO RESERVOIR (CVP WATER)			
Beginning Balance (January 1)	2,000	2,000	2,000
Change in Storage—Bank Deposit or Withdrawal	0	0	0
Ending Balance (December 31)	**2,000**	**2,000**	**2,000**
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**79,000**	**100,800**	**125,800**

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

As a public agency, the District is concerned about providing a reliable, high-quality, long-term water supply to residents of this County. As a water supplier in California's increasingly competitive water market, the District strives to provide superior services as efficiently as possible. Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water.

This chapter describes the benefits and services that the District provides in attaining its water supply goals. In particular:

- Long-term planning for water supply
- Business planning
- Stream and watershed management
- Hydrologic data management
- Government relations and public information
- Managing groundwater recharge
- Surface water transportation and storage
- Imported water
- Water recycling partnerships and assistance
- Water conservation
- Treated water operations
- Resource protection

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the wholesale water supplier for Santa Clara County, the District is responsible for planning for the County's long-term water supply. With the rapid growth in economy and population, the County is facing the crucial question: How to ensure there is sufficient water of adequate quality to satisfy future demand?

This question was addressed in the District's Integrated Water Resources Plan (IWRP), which was accepted by the District's Board on December 10, 1996. The IWRP is both a conceptual master plan and an ongoing monitoring and update process. The objective of this first IWRP was to develop a preferred strategy to meet water shortages expected in future dry years. The planning began in March 1996, working closely with members of the general public, community, business and environmental groups, cities, and other agencies. The IWRP's preferred strategy through the year 2020 includes programs based on four primary components: water banking, water transfers, water recycling, and water conservation. These programs, which are already underway, will be fully phased into operation in response to water supplies and demand. They are discussed in more detail later in this chapter.

Business Planning

This fiscal year, the District developed its first formal Business Plan for the Water Utility. The purpose of the Business Plan is to define a business strategy framework that embraces the Board's strategic goals and objectives. The Business Plan assesses the District's position in the local, state and federal setting, as well as in California's statewide water marketplace. The identification of outcomes within the Business Plan communicates to Water Utility customers how District staff intends to pursue the Board's goals and objectives and meet customer needs. Although we are a public agency, the District's Water Utility Business Plan recognizes the need to manage our functions using a businesslike approach and discusses important aspects such as: marketplace, customer service, business strategy, level of service, and cost of service.

Stream and Watershed Management

As the water management agency in the County, the District plays a key role in balancing the water needs of a growing economy and those of the environment. The District has initiated a stream/watershed management approach to manage its activities in and near streams as a responsible steward of watersheds and riparian corridors and in compliance with regulatory mandates. For example, to address water rights complaints filed with the State Water Resources Control Board, the District initiated the Fisheries and Aquatic Habitat Collaborative Effort. This effort includes studying the aquatic habitats in our managed streams and the impacts on them from District operations.

The Water Utility uses the County's waterways to transport water to recharge facilities and for recharge in the streambeds. In 1999, several projects are planned to improve conditions for anadromous fish. The largest project will construct a fish ladder and fish screen at the Blossom Hill drop structure on the Guadalupe River. The fish ladder at Blossom Hill in combination with the removal of two barriers that impede the upstream passage of salmon will provide access to 19 miles of spawning habitat. Additional fish ladders and screens are planned for Masson Dam, Penitencia Creek, and Coyote Percolation Dam. Work on all of these projects is scheduled to begin in April 1999, when the in-stream construction season begins. The projects are expected to be completed by the end of the 1999 construction season. A total of $4.0 million was appropriated in the 1998-99 budget for fish ladders, screens, and barrier removal.

Outside of District activities, changes in land use and new developments affect water resources. The Water Resource Protection Program provides for the enforcement and application of the District's Ordinance 83-2 (which regulates activities near District facilities), review of external environmental documents, and coordination with other agencies with regard to their land use decisions.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, and other information that is essential to planning and operating our water distribution and delivery system.

Government Relations

The District's Government Relations Unit coordinates timely communication and advocacy of the communities water-related interests with the State Legislature, U.S. Congress, state and federal regulatory agencies, and local governments. This unit increases recognition of the District at all legislative levels; builds legislative support for District programs and policies; and develops timely public policy analyses and responses to local issues affecting the District and its retail customers, as well as local business, community, and minority groups.

Public Information and Education

Public information programs are designed to inform and educate residents about key water quality and water supply issues that affect the Water Utility's operations and planning. The Public Information Office prepares news releases on current events and prepares newsletters and brochures to inform residents of water supply and water quality issues. The utility's water education program provides hands-on instruction and curriculum materials for prekindergarten through college level students and educators. Public education is a key component of the District's water conservation and resource protection programs, helping to ensure safe and reliable future supplies.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District is working on programs to ensure adequate water supplies in both the short and long term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet needs in future years.

To ensure the availability of 300,000 acre-feet annually to 15 cities spread over 1,300 square miles, the Water Utility operates the following facilities:

- ten surface reservoirs with a capacity of 169,000 acre-feet
- 17 miles of canals
- 393 acres of recharge ponds
- 142 miles of pipelines
- three water treatment plants
- three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Utility Facilities map, Appendix C.) Major facilities include the District's ten dams and reservoirs: Anderson, Almaden, Calero, Coyote, Chesbro, Lenihan, Stevens Creek, Uvas, and Vasona; which conserve local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and State Water Project facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The Santa Clara Valley groundwater basin stores about one-half of the County's annual water supply for potable use. The basin is divided into three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C). The District owns and operates more than 30 recharge facilities in six major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 acre-feet. Although groundwater subbasins are also somewhat replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the bay.

The Santa Clara subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 1998, the District replenished this subbasin with 57,100 acre-feet of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the District were replenished with 23,200 acre-feet of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission relative to the safety of District dams.

Imported Water

The State Water Project, Federal Central Valley Project (CVP), and City and County of San Francisco's Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County, delivering water from the northern California mountains and Sierra Nevada via the Sacramento/San Joaquin Delta and the Hetch Hetchy Aqueduct. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the Pacheco Conduit, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members are currently devoting considerable time in three areas related to securing reliable supplies of imported water: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The future of our drinking water supplies depends on the health of an ecosystem that is miles away from this County: the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta). The Bay-Delta is an intricate web of waterways at the junction of the San Francisco Bay and the Sacramento and San Joaquin rivers. It is home to the largest estuary on the west coasts of North and South America. The state and federal facilities that move water through the delta supply drinking water for more than 22 million Californians and provide a source of irrigation water for California's $24 billion farm industry.

The District imports water through this system to meet over half of the County's water needs through three major water projects: the State Water Project, the Federal CVP, and San Francisco's Hetch Hetchy Project. However, decades of environmental neglect threaten the health of this fragile ecosystem, and have contributed to a decline in its water quality. Competing demands on a limited resource led to decades of conflicts and uncertainties in this imported supply. Furthermore, the vulnerability of delta levees to seismic and flooding failures threatens the infrastructure for and quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues, improving source water quality, and strengthening the agreements among state and federal agencies and various water users to increase overall reliability of supply. We do this by actively participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a coalition of state and federal agencies has worked to develop a long-term "fix" for problems in the Bay-Delta. The coalition, known as the CALFED Bay-Delta Program, has been developing a long-term plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. The District is actively involved in the development and evaluation of this program because of the importance of the outcome on the reliability and quality of the District's imported water supplies.

After extensive public and technical review, CALFED identified three potential alternative solutions, each of which comprehensively addresses the four main concerns with the Bay-Delta system: ecosystem degradation, water supply reliability, water quality, and levee system integrity. Technical staff and public working committees evaluated all three alternatives against such criteria as benefits to water quality, impact on fish and wildlife, total cost, and operational flexibility. In December 1998, after 4 years of hard work, a draft preferred alternative was selected to address these issues. The draft preferred alternative focuses on two areas: near-term actions to start addressing the four program objectives and a decision-making framework for considering potential additional facilities for water storage and conveyance. Certification of the final environmental documents is expected to occur in June 2000.

After certification of the final programmatic Environmental Impact Report/Environmental Impact Statement, "Phase III" of the CALFED process is scheduled to begin in mid-2000. This phase of implementation and evaluation will emphasize ecosystem restoration, water conservation and recycling, levee stability, water quality, watershed management, and water transfers. A successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

Banking Available Supplies for Future Use

The District's IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy, when it approved an agreement with Semitropic Water Storage District to store 45,000 acre-feet of State Water Project water. Another 35,000 acre-feet were added in 1997, and the District stored over 23,000 acre-feet in the summer of 1998. After accounting for physical system losses in Semitropic Water Storage District, the District now has over 98,000 acre-feet in storage. The District is banking available supplies in 1999.

Discussions with other water contractors to reallocate entitlements of imported water have resulted in agreements that will stabilize available imported supplies through wet and dry periods.

Managing Central Valley Project Contract Issues

The District's agreement with the Bureau of Reclamation (Reclamation) requires eventual payment of a major share of their costs for constructing the San Felipe Division of the CVP. Under the 1977 contract , the District initially paid a reduced rate for its water deliveries, in recognition of the District's need to expand its local infrastructure costs to accept CVP water. At specified times, the per acre-foot costs were scheduled to increase, the increased amount going toward payment of our share of the federal CVP capital costs (the San Felipe Division facilities). During the deferred payback period, when per acre-foot rates were lower than Reclamation's actual costs, Reclamation tracked the shortfall and calculated interest into the obligations owed by the District and other local participants. However, Reclamation and the District disagreed on a number of items related to their calculation of interest, as well as federal allocation of costs and funding related to the CVP.

While the exact repayment formulae remain under debate, the District continues to make limited payments under its 1977 contract toward the federal capital costs, but is setting aside funds to pay for its share of the San Felipe facilities in a reserve, the Bureau Repayment Appropriation. At the same time, the District is negotiating resolution of the issues that are blocking payment of the District's accumulated costs of the CVP.

By September 1996, a number of the financial issues had been resolved, and the Board approved payment of $20 million toward the District's accrued obligations to the CVP; one half of the payment was funded from the District's Bureau Repayment Appropriation.

In 1997, the District signed a binding agreement with Reclamation to renew its CVP contract pursuant to the provisions of the CVP Improvement Act, and at the same time reached agreement with Reclamation on another set of financial issues. If a renewed CVP contract is successfully negotiated, the District would be required to pay the full cost of water deliveries on an ongoing basis. The District is prepared to pay the full cost for water deliveries, to prevent further accrual of debt and interest payments to Reclamation as occurred under previous contractual payments that did not cover Reclamation's full costs. The financial projections presented in Section IV of this report assume that future payments to Reclamation will fully cover costs and prevent further debt increases and associated interest obligations for the District.

In 1998, the District initiated a project with other CVP M&I contractors to address the most significant and complex remaining financial issue, and resolution is expected by 2000 at the latest. This is approximately the same time frame in which the renewed CVP contract will be negotiated.

Water Recycling Partnerships and Assistance

Recycled water was identified in the IWRP as one element of the preferred strategy to increase water supply reliability. The District's current approach is to develop partnerships with the cities and publicly-owned treatment works that develop and/or distribute recycled water. Two major efforts are underway.

The first is to provide financial support for the distribution of nonpotable water. The District provides financial support under specified agreements to cities that develop recycled water. The District currently has agreements with the City of Sunnyvale and the South Bay Water Recycling Program. In 1997, the Board increased the District's financial support to suppliers of nonpotable recycled water from $93 per acre-foot to $115 per acre-foot.

The District is working with the city of San Jose on the South Bay Water Recycling Program, providing financial and technical support for program planning, design, construction, and inspection, and acting as a liaison with water retailers. Phase I—now complete at a cost of $140 million—consists of nearly 60 miles of transmission and distribution pipelines, pump stations, and reservoirs. Deliveries began in October 1997 and are expected to reach 5,000 acre-feet per year in 1999. Phase 2—now underway—will create short- and long-term master plans to increase recycled water distribution to 50,000 acre-feet per year by 2020.

The second of our major efforts is the recent completion of preliminary studies with the South County Regional Wastewater Authority. These studies confirm the feasibility to restore recycled water deliveries through an existing recycled water pipeline in Gilroy. The District plans to rehabilitate and operate the pipeline to deliver nonpotable water supplied by the South County Regional Wastewater Authority. This capital improvement project is estimated to cost approximately $6.1 million and is included in the projection of South County capital costs (see Table 3-1).

Other District activities include staff support to the Water Retailer's Recycling Subcommittee, the Agricultural Water Advisory Committee, and the Landscape Advisory Committee. Staff members also track technical and regulatory developments that affect the production and use of recycled water and participate in statewide recycling organizations and activities.

Water Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand, thereby helping to avoid shortages in the future. State and federally mandated conservation programs include implementing a set of BMPs contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. Key program elements include ultra-low-flush toilet rebates, low-flow showerhead distribution, promoting water efficient landscaping, and implementing commercial/industrial and agricultural water management programs. The Water Conservation Program's goal, as identified in our IWRP, is to reduce water demands by a total of 46,000 acre-feet per year by the year 2020. The District's program provides financial, administrative, and technical assistance to both the water retailers and to residents and businesses within the County. As of late March 1999, the District has accomplished the following:

- Ultra-low-flush toilets installed: 155,863
- Water efficient washing machine rebates issued: 6,314
- Low-flow showerheads distributed: 79,266
- Faucet aerators distributed: 16,882
- Large turf audits completed (Irrigation Technical Assistance Program): 236 sites
- Financial incentives paid to businesses for making water efficiency improvements: 13 sites, $78,099

In the summer of 1998, the District implemented a pilot residential water audit program, in which residents were provided free water use evaluations of their homes and gardens. During the pilot program 441 evaluations, offered to residents of Milpitas, Morgan Hill, Mountain View, Santa Clara, and portions of San Jose, were completed. The program provided a valuable service to customers by demonstrating straightforward ways to save water and reduce their water bills. Leaks were identified by the surveyor in over one-third of the homes. In follow-up telephone surveys, the vast majority of customers said they had repaired leaks identified during the survey. Customers unanimously stated that the program was worthwhile. The District plans to implement a full-scale countywide program beginning in 1999, with a goal of completing over 8,000 surveys by July 2000.

In the fall of 1998, the District initiated a pilot Mobile Lab Program, which provides in-county farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Water Conservation and Nitrate Management Programs have worked together closely to ensure that efficient water use and nitrate (fertilizer) management is addressed by the Mobile Lab Program. The benefits of this program are twofold: by recommending ways to manage fertilizer and irrigation to more closely match actual crop needs, the potential for nitrate leaching into the groundwater can be reduced while maximizing water use efficiency. The recommendations are designed to maintain or improve agricultural productivity. The first irrigation evaluation was conducted in October 1998 at a sod-producing farm in South

County. Preliminary assessment of the data indicate a 25 percent potential water use reduction. To date, at least ten farmers and growers have signed up to receive the Mobile Lab field tests and three are scheduled for this spring. In addition, the District owns and operates two California Irrigation Management Information System (CIMIS) stations. CIMIS stations provide weather data that can be used to improve irrigation efficiency, thereby reducing the use of water and the movement of nitrates to aquifers. The data is available to the public on our website, or by calling the CIMIS hotline at (408) 267-3127. The water conservation and nitrate management programs are also working together to hold various workshops in the South County on irrigation, nutrient, and pesticide management.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers and (2) protecting surface and groundwater resources from contamination. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below. Specific information about our water quality programs are available on our website (www.scvwd.dst.ca.us). Monthly water quality test results are also posted.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant, Rinconada Water Treatment Plant, and Penitencia Water Treatment Plant, which provide high-quality treated water to the residences and businesses in the County.

Reflective of its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. This is accomplished by evaluating treatment plant facilities, processes, operating and maintenance procedures and management oversight practices, and then implementing appropriate improvement measures. Participation in this program has already yielded impressive results. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

The District is proceeding with process improvements at each of its three treatment plants, in response to two relatively new federal Safe Drinking Water Act (SDWA) amendments: the Enhanced Surface Water Treatment Rule and the Disinfectant/Disinfection By-Product Rule, announced in December 1998. The actual compliance date for these amendments is February 2002, which allows time for necessary plant modifications. The planned changes in the process for water treatment will reduce the incidence of harmful by-products that can occur when surface waters containing organic materials are disinfected with chlorine.

Disinfection using oxidants such as liquid chlorine or chloramines is an important step in the purification of drinking water. The destruction of disease causing organisms by disinfection has been in widespread use since the early 1900s and has eliminated outbreaks of water-borne diseases such as cholera and typhoid in this country. Maintaining trace levels of chlorine or chloramine in drinking water after it leaves the treatment plant (called residual disinfection) provides the added benefit of preventing microbial growth in the pipelines throughout the distribution system. Disinfection by-products are compounds that can form when natural organic matter in water reacts with chemicals used for disinfection. Some disinfection by-products, such as trihalomethanes, are suspected to have long-term health effects, which is why the SDWA amendments were written.

The District is currently upgrading all three of its drinking water treatment plants in two stages by installing improved methods of treatment to meet these new drinking water regulations. Stage 1 changes include modifications to the chlorine system, providing ferric chloride and potassium permanganate chemical feed systems, installing total organic carbon analyzers, and implementing other plant upgrades. Some of the Stage 1 strategies include delaying chlorination which reduces the formation of by-products by limiting the time that chlorine is in contact with organic materials and enhancing coagulation which improves the removal of organic materials before the chlorination process. As of January 1999, District staff has completed their review of the 50 percent design plans from our consultant. We expect the project design to be completed and the construction contract to be awarded by November 1999. Construction is expected to be complete in 2001. The estimated cost for Stage 1 construction is $17 million.

Stage 2 of the planned work will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water. This allows us to further improve water quality and to meet more stringent regulations anticipated to be promulgated in 2000 and 2002. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. The Stage 2 $125 million (1999 dollars) capital improvement project is scheduled for completion in 2004. To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory (see Table 3-1 for construction schedule). The facility will replace the 30-year old Rinconada laboratory and will more reliably and cost-effectively monitor the quality of our water supplies. Also, in preparation for the changes needed to meet regulatory requirements, work totaling $9.7 million is almost completed at the 25-year old Penitencia Water Treatment Plant to rehabilitate its aging facilities.

An additional approach to managing residuals from treatment processes is to reduce the organic content of source water. The water imported by the District through the Delta has high levels of organic compounds from agricultural drainage and urban discharges. A major objective of the District's participation in CALFED is to improve the quality of water available as import from the Delta. The District will only endorse CALFED solutions that improve water quality in the Delta. A discussion of the District's participation in the CALFED process is presented elsewhere in this report.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. The purpose is to ensure water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. This includes all existing regulations and provisions of the SDWA Amendments of 1996, the California SDWA, and any provisions of the District's treatment plants' operating permits from the California Department of Health Services. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the County's sources of water.

Methyl Tert-Butyl Ether

A recently identified new threat to the drinking water supply is the gasoline additive called Methyl tert-Butyl Ether (MTBE). MTBE is a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act. The State Air Resources Board mandated the year-round statewide use of reformulated gasoline in 1996. Since November 1996, the District, in partnership with the County's water retailers, has engaged in an aggressive monitoring program to track the presence of MTBE that may affect County water. In November 1997, the District confirmed the presence of small amounts of the chemical compound in water entering and leaving its three treatment plants. Traces of the additive have been found in a well owned by Great Oaks Water Company; this well was removed from service. To protect local reservoirs from MTBE, the District's Board again voted in March 1999 to reduce the number of powerboats (primarily personal watercraft) allowed on three of the District's ten reservoirs to ensure that concentrations do not surpass our target of 3 parts per billion (ppb) in the reservoirs.

The human health effects of ingesting MTBE-contaminated water are not well known. However, the United States Environmental Protection Agency has labeled MTBE a "possible" human carcinogen and has issued a drinking water advisory of 20 to 40 ppb to protect public health and for taste and odor concerns. The California Department of Health Services' Office of Drinking Water has established a secondary maximum contaminant level for MTBE of 5 ppb. Secondary standards are set for aesthetic qualities (taste and odor). The California Office of Environmental Health Hazard Assessment has adopted a Public Health Goal of 13 ppb for MTBE. The Department of Health Services will set a primary maximum contaminant level (related to health concerns) as close to the Public Health Goal as practical. Finalization of the maximum contaminant level is scheduled for July 1, 1999.

The District is aggressively pursuing long-term solutions to this potential problem through a two-pronged approach: a high level of effort to prevent more of the contaminant from entering public water supplies, and expanding our legislative efforts (through our Government Relations Office) to restrict the use of MTBE as a gasoline additive. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasolines. Monitoring will continue at reservoirs and treatment plants. The District has also conducted a pilot study to determine if MTBE releases are occurring at sites that comply with new standards for underground storage tanks.

In June, the Board of Directors sent a letter to the County Board of Supervisors, recommending a countywide prohibition against the sale or distribution of gasoline containing MTBE or other ether oxygenates. If implementation proceeds, the Board has committed to cost share for enforcement.

The District is also proceeding with a no-cost groundwater testing program for residents whose wells are within ½ mile of known MTBE contamination sites. This is a special 2-year survey that will not only assure well owners of the current quality of their well water, but also provide benchmark data outside the areas near underground tanks that are the focus of current risk assessment efforts. As of March 1999, 50 private wells have been sampled since the beginning of the program. MTBE has been detected in 4 of the 50 wells.

Nitrate Management

A different threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than 6 months of age. Nitrate contamination has become a particular concern in the southern portion of the County. The District has designed a Nitrate Management Program to reduce nitrate loading, to reduce nitrate exposure, and to monitor nitrate occurrence in the Llagas and Coyote groundwater subbasins of South County.

To reduce exposure to unsafe levels of nitrate, the District created a fact sheet on nitrate and distributed it to well owners. The fact sheet is also posted on the District's web site (www.scvwd.dst.ca.us). In 1998, the District offered to test groundwater samples for nitrate for residents in the southern part of the County. Through August 1998, a total of 598 wells were tested in both subbasins. Of the 508 wells tested in the Llagas subbasin, 55 percent exceeded the 45 milligrams per liter health standard for nitrate, as set by the United States Environmental Protection Agency. Residents were mailed the results of the analysis as well as options for treatment where recommended.

To reduce nitrate loading to the aquifer, the District has launched a public education outreach program. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. Efficient irrigation management is a key to limiting the amount of fertilizer nitrogen that is leached beyond the root zone and into the groundwater. Through cooperation between the District's Water Conservation and Nitrate Management Programs, the District is providing a Mobile Irrigation Laboratory Service in combination with a CIMIS service to farmers in the County to maximize efficiency of irrigation and fertilizer use. These programs are described in the Water Conservation section of this chapter. The District has also organized several workshops on irrigation and nutrient management for the agricultural community and has given away over 70 test kits to growers for quick, on-site soil nitrate analyses. Proper septic system maintenance and residential fertilizer applications were addressed in the educational fact sheet.

To monitor nitrate occurrence and distribution, the District has established a network of approximately 25 existing deep water supply wells which it will periodically monitor and is working on installing several shallow wells in the South County area. The monitoring program is designed to look at vertical and areal as well as seasonal and temporal variations in nitrate concentration.

Underground Storage Tank Fuel Cleanup Program

The District oversees the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as MTBE from leaking underground storage tanks.

Over 2,150 fuel leak cases have been reported in the County, and 63 percent of these cases have received regulatory closure from the State Water Resources Control Board, the San Francisco Bay or Central Coast Regional Water Quality Control Boards, or the District. The majority of the remaining cases are associated with releases of gasoline. MTBE has been detected at more than 320 of the active tank sites. MTBE contamination has been detected in at least one large public water supply well, one water well that supplies a local school district, and several private wells. The District is expanding its underground fuel storage tank oversight to identify and cleanup those sites that pose the greatest risk to the groundwater basin.

The District is currently overseeing 692 tank sites in North County and 23 sites in South County. To date, 1,020 sites in North County and 27 sites in South County have been signed off by the District. The remaining sites are overseen by the Regional Water Quality Control Boards, with the exception of six sites that receive oversight from the City of Gilroy.

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Water Code.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During the first half of fiscal year 1998-99 (through February 1999), the District:

- permitted 1,362 wells and other deep excavations constructed or destroyed
- inspected 981 wells and other deep excavations constructed or destroyed
- registered 401 wells constructed
- provided drilling services to the owners of 12 abandoned wells

Hazardous Materials Management

To prevent contamination of the County's water supply from hazardous materials, the District manages the investigation, analysis, removal, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of source areas such as reservoirs, recharge ponds, and creeks.

Urban Runoff Program

The District has dedicated efforts to improve the quality of storm water runoff as a member of the Santa Clara Valley Urban Runoff Program. Efforts such as this improve the quality of storm water that flows into streams in Santa Clara Valley. The District participates in this program as 1 of 15 copermittees under a single Clean Water Act permit from the Regional Water Quality Control Board. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of this program. For instance, the permit renewal fee is $10,000 per year. Combining 15 agencies under one permit saves $140,000 per year and requires that only one set of annual reports be prepared and submitted to the Regional Water Quality Control Board, rather than 15.

CAPITAL IMPROVEMENTS

Capital improvement projects in progress include the expansion and upgrade of the Raw Water Control System, the repair of the landslide on the Santa Clara Tunnel, Lenihan Dam outlet pipe modifications, and replacement of geotechnical instruments at Almaden Dam and Lenihan Dam. Table 3-1 shows the projected schedule for capital projects for 1998-99 and the next 5 fiscal years.

TABLE 3-1

Capital Improvement Projects—Fiscal Year 1998-99 Through 2003-04

Water Utility Capital Improvement Projects ($ Millions)	98/99 Adjusted Budget	99/00 Adopted Budget	00/01 Adopted Budget	01/02 Projection	02/03 Projection	03/04 Projection
SOURCE OF SUPPLY						
South County Recycled Water Improvements	0.8	3.9	1.4	0.0	0.0	0.0
Santa Clara Tunnel Landslide	0.2	0.6	0.1	0.0	0.0	0.0
Lenihan Dam Outlet Modifications	0.2	0.3	0.2	0.7	5.7	0.6
Future Facility Rehabilitation Needs	0.0	0.0	0.0	0.0	0.0	2.5
Other Source of Supply Capital Improvement	0.1	0.8	0.7	0.0	0.0	0.0
RAW WATER TRANSMISSION & DISTRIBUTION						
Raw Water Maintenance Wetlands Mitigation	1.0	0.0	0.0	0.0	0.0	0.0
Raw Water Control System	0.4	1.2	0.6	0.0	0.0	0.0
Guadalupe River Fish Ladder Modifications	1.6	0.2	0.0	0.0	0.0	0.0
Coyote Canal Diversion Fish Screen	0.7	0.1	0.0	0.0	0.0	0.0
Coyote Canal Extension Abandonment	0.0	0.0	0.2	1.0	0.2	0.0
Coyote Percolation Dam Fish Ladder	0.9	0.1	0.0	0.0	0.0	0.0
Evergreen Canal Abandonment	1.0	0.0	0.0	0.0	0.0	0.0
Masson Dam Fish Ladder/Screen	0.8	0.2	0.0	0.0	0.0	0.0
Almaden Calero Canal	0.0	0.1	2.7	0.3	0.0	0.0
Future Facility Rehabilitation Needs	0.0	0.0	0.0	0.0	0.0	2.5
Other Raw Water T&D Capital Improvement	0.3	0.9	0.4	0.0	0.0	0.0
WATER TREATMENT						
Water Quality Regulation Compliance Project	0.9	0.7	0.9	0.7	0.2	0.2
Water Treatment Imrpovement Project Stage 1	2.4	21.5	2.3	0.6	0.0	0.0
Water Treatment Improvement Project Stage 2	0.3	40.5	59.1	21.7	1.7	1.7
Penitencia WTP Control Center Upgrade	0.1	1.1	0.4	0.0	0.0	0.0
Penitencia WTP Clearwell Modifications	4.0	0.4	0.0	0.0	0.0	0.0
Penitencia WTP Landscape & Erosion Control	0.8	0.1	0.0	0.0	0.0	0.0
New Water Quality Laboratory	0.1	1.5	6.4	0.5	0.0	0.0
Future Facility Rehabilitation Needs	0.0	0.0	0.0	0.0	0.0	2.5
Other Water Treatment Capital Improvement	0.8	0.6	0.3	0.0	0.0	0.0
TREATED WATER TRANSMISSION & DISTRIBUTION						
SCVWD SFWD Intertie	0.0	2.8	0.1	0.0	0.0	0.0
Milpitas Pipeline Relocation	0.9	0.3	0.1	0.0	0.0	0.0
Rinconada Reservoir Roof Rehabilitation	0.0	0.2	0.9	0.0	0.0	0.0
Future Facility Rehabilitation Needs	0.0	0.0	0.0	0.0	0.0	1.5
Other Treated Water T&D Capital Improvement	0.3	0.2	0.1	0.0	0.0	0.0
ADMINISTRATION & GENERAL						
Automated Mapping/GIS	0.1	0.0	0.0	0.0	0.0	0.0
Total Water Utiltiy Capital Improvements	**19.0**	**78.1**	**77.0**	**25.6**	**7.8**	**11.5**
Total Water Utiltiy Capital Improvements (inflated by 3% per year beyond FY 2000)	**19.0**	**78.1**	**79.3**	**27.1**	**8.5**	**12.9**
Funding Sources						
Current Revenue	9.3	12.7	3.4	0.0	0.0	7.5
Reserves	9.7	1.6	12.2	0.0	0.0	0.0
Revenue Bonds	0.0	63.8	63.8	27.1	8.5	5.4
Total Water Utility Capital Improvements Funded	**19.0**	**78.1**	**79.3**	**27.1**	**8.5**	**12.9**

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for District functions and the funding approach endorsed by the Board during the rate setting process for fiscal year 1998-99. Section I reported the adopted rates for 1999-00. Section IV describes the multiyear financial analysis and the recommended funding approach that serve as the foundation for the decisions on rates in each zone. It also presents projected water rates in each zone for the next 10 years. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

Between 1988 and 1993, a statewide drought limited water supplies and required extensive conservation, leading to more efficient use of available supplies. In the three worst years of the drought, the Water Utility saw its volume of water sales decline by over 20 percent relative to deliveries in 1987-88. To maintain revenues over this period, the M&I rate increased 160 percent for the North County and 400 percent for the South County. When the rains returned in 1993, the Board lowered rates by roughly 10 percent for the fiscal year starting July 1, 1993.

Water rates remained essentially unchanged for 5 years until fiscal year 1998-99 when the M&I rate in North County was raised from $240 per acre-foot to $260 per acre-foot. This increase was the first in a series of rate increases that will be needed to meet the projected expenses of the Water Utility.

As described in Section III, the future contains many challenges that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in each of the next 6 years, as the utility invests over $225 million in capital improvements.

There are two major contributing factors to the long-term need for revenues:

- Quality and safety of water delivered from the District's three water treatment plants
- Costs of imported water from the Federal CVP

The financial projections shown in this section incorporate the estimated costs to address these factors. The financial outlook does not include any estimates of the costs for two additional challenges that could also impose significant future financial demands on Water Utility customers:

- Costs to implement proposed solutions to the Bay-Delta water quality problems.

- Costs of potential water supply capital investments to implement the IWRP, such as future recycled water facilities in the North County.

These items are in the conceptual planning stages and include a wide range of potential program costs and facility investments (see Section III).

REVIEW OF DISTRICT'S FINANCES FOR 1997-98, 1998-99, AND 1999-00

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital. The net requirements are the revenues that must be available from water sales, property taxes, and other sources such after using revenue bond proceeds and allowing for funds added to, or used from, reserves.

As projected in the long-term water rate analysis from last year, the District has begun to carry out plans to achieve the Board's strategic goal of supplying reliable and high-quality water and increasing the District's accountability. The initial results of these efforts have contributed to an increase in operation requirements from 1997-98 to 1999-00. Some of the major increases in the 1998-99 and 1999-00 budgets are for water conservation, water recycling activities, water banking, and completion of the Fisheries and Aquatic Habitat Management Plan. The increased cost also reflects the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements. Table 4-1 shows the revenue requirements for operations and other activities for 1997-98, 1998-99, and 1999-00.

The cost of water purchased from the federal and state projects continues to be a major budgetary item. Table 4-1 shows water purchases increasing in both in 1998-99 and 1999-00. To fund the District's accumulating obligation for CVP capital cost repayment will require approximately $20 million per year. Budgeted funds that are not paid out to the CVP for water purchases are set aside in a reserve, while negotiations are underway with the Reclamation to settle on the amount of the District's obligation.

No extraordinary outlays occurred in 1997-98, nor are any projected for 1999-00. However, outlays for extraordinary items in 1998-99 are estimated at $15.2 million for the following:

- $5.6 million for banking water with Semitropic Water Storage District
- $3.4 million for expanded efforts in water conservation program
- $4.6 million for emergency repairs at Lenihan Dam
- $0.85 million for cost sharing the work planned with South County Recycled Water Authority
- $0.75 million for planning studies in conjunction with South Bay Water Recycling

Construction costs of capital improvements mainly directed at enhancing the safety of drinking water delivered from the District's three water treatment plants are projected to increase rapidly from 1997-98 forward. Total Water Utility capital appropriations for 1997-98 were $14.7 million, with 50 percent of that amount designated for enhancing and upgrading the facilities in District treatment plants. In fiscal year 1998-99, the capital investment for the three treatment plants is about 50 percent of the total utility capital appropriation of $19 million. For the design and construction work projected to begin in 1999-00, the capital investment for the three treatment plants will comprise more than 75 percent of the budgeted capital appropriation of $78.1 million.

Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. In 1997-98, $11.4 million was added to the reserves in anticipation of future uses. $5.5 million was added specifically to the CVP Deficit Repayment Fund and $2.7 million was added to the Supplemental Water Supply Fund. Approximately $3 million was added to the reserve designated for future years' capital. Appendix B gives a description of each of the Water Utility Reserve Funds.

In 1998-99, a net reduction of $14.4 million in reserves is estimated as a result of the following:

- A decrease of $10.8 million in Operating Reserves to pay for the revenue requirement for the extraordinary items mentioned above.
- A decrease of $9.6 million from Capital Reserves to pay for the increased capital investments.
- A decrease of $1 million in Contingency Appropriations for Lenihan Dam emergency fix.
- An increase of $6 million to Bureau Repayment Appropriation in preparing to pay for the District's accumulated obligation to the Federal Bureau for CVP capital investment.
- An increase of $1 million to the Working Capital Appropriation.

To solve the challenge of water supply and quality issues, the District will use both reserves and revenue bonds to support a smooth, gradual increase in water rates to meet the unprecedented revenue requirements in the next 6 years. In 1999-00, the District is planning to pay roughly 83 percent of the capital investment with $63.8 million of revenue bond proceeds. At the same time, $8.6 million will be added to utility reserves as a result of the following:

- Add $1 million to restore the Contingency Appropriation fund, which was used for extraordinary items in 1998-99.
- Add $10 million to the Bureau Repayment Appropriation.
- Decrease $1.6 million from Capital Reserves to pay for the increased capital investment.
- Decrease of $0.8 million from Working Capital Appropriations.

TABLE 4-1
Overview of Water Utility Revenue Requirements
($ Millions)

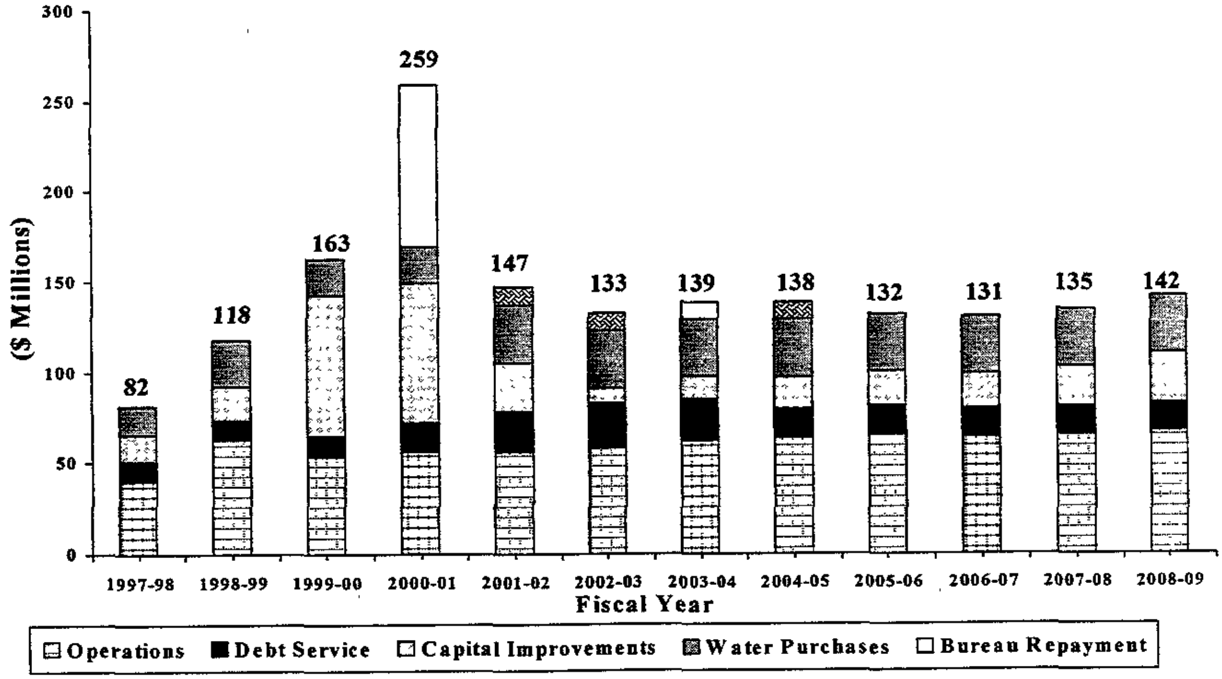
Revenue Requirements	Actual 1997-98	Estimated 1998-99	Projected 1999-00
Operations	51.0	60.3	64.6
Water Purchases			
Federal Water	4.0	14.0	9.2
State Water	12.3	11.0	11.0
Extraordinary Items	0.0	15.2	0.0
Capital Projects	14.7	19.0	78.1
TOTAL REQUIREMENTS	**82.0**	**119.5**	**163.0**
Add/Subtract Changes in Reserves	11.4	(14.4)	8.6
Less Revenue Bond Proceeds	0.0	0.0	(63.8)
Less Projected Carryover	0.0	(2.0)	0.0
Net Requirements From Water Utility Revenues	**93.4**	**103.1**	**107.8**

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To design a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next 10 years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. As shown in Table 3-1, initial stages of the capital investment needed to comply with mandated water quality regulations are underway at the three water treatment plants. These capital improvement plans are largely responsible for the rapid growth in total outlays over the next 6 years depicted in Figure 4-1.

In addition to the capital improvements, the plan to pay to the Bureau of Reclamation (Reclamation) the District's share of the San Felipe Division of the CVP also contributes to the magnitude of projected outlays. The District anticipates agreement with Reclamation on payment of accumulated costs by December 2000. We project paying off the $128 million obligation over a period of 5 years, starting with $89.777 million in 2000-01, and followed by consecutive annual payments of $10 million in 2001-02, $10 million in 2002-03, $9 million in 2003-04, and $9.223 million in 2004-05. Concurrently, annual payments of approximately $20 million for CVP are projected to pay the full cost of CVP water and the District's share of CVP capital. In addition to annual payments of approximately $11 million for State Water Project water, the District is also planning to pay approximately $30 million over the next 10 years for operation and maintenance costs together with the cycling fee (capital investment needs) for the water stored in the Semitropic Water Storage District. Annual operation expenditures will increase significantly when the ozonation processes begin at the three water treatment plants. In general, other operating costs are expected to rise with inflation, barring unforeseen factors that may place new requirements on the utility.

FIGURE 4-1
2000 Ten-Year Program—Projected Expenditure



LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

To provide for the financial requirements projected for the next 10 years requires a financial plan that combines current revenues (from water sales), revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $222 million for capital facilities and equipment over the next 6 years.

Current utility revenues are about $100 million annually, and revenues from water sales are about $75 million. Relying on revenue from water sales to fund capital needs would require raising and lowering rates as capital needs fluctuate. Capital reserves are expected to be about $19 million at the end of 1998-99 and, therefore, would be rapidly depleted by serving long-term needs.

Alternative approaches to meet the future financial needs of the Water Utility were investigated and presented to the District's Board and the public during public hearings in 1998. With the enormous amount of capital investment in the next 6 years, using $185 million in revenue bonds to fund the total of $222 million capital improvements is recommended to avoid large fluctuations in water rates.

During the public hearings on water rates in May and June of 1998, alternative financing approaches were presented to the Board. Based on the financial analysis and after considering public comments, the Board adopted an 8.3 percent increase in the North County groundwater charges for fiscal year 1998-99. This set the stage for a series of six more annual increases including the adopted increase of $25 per acre-foot to $285 per acre-foot for 1999-00 rate for the North County groundwater charges. As shown in Figure 4-2, over a 7-year period rates are projected to increase from $240 per acre-foot in 1997-98 to $360 per acre-foot in 2004-05, an average increase of 7 percent per year.

The Water Utility has embarked on a financing strategy that relies on revenue bonds for meeting capital needs and uses available capital reserves to moderate year-to-year increases in water rates. Table 4-2 shows the projected revenues, expenditures, and reserves over the next 10 years based on the financial strategy now in place. Using revenue bond financing means that the District will see debt service rise from $11 million in 1999-00 to $25 million in 2002-03, assuming the treatment plant improvements are constructed as indicated in Table 3-1.

FIGURE 4-2
Ten-Year Rate Projection

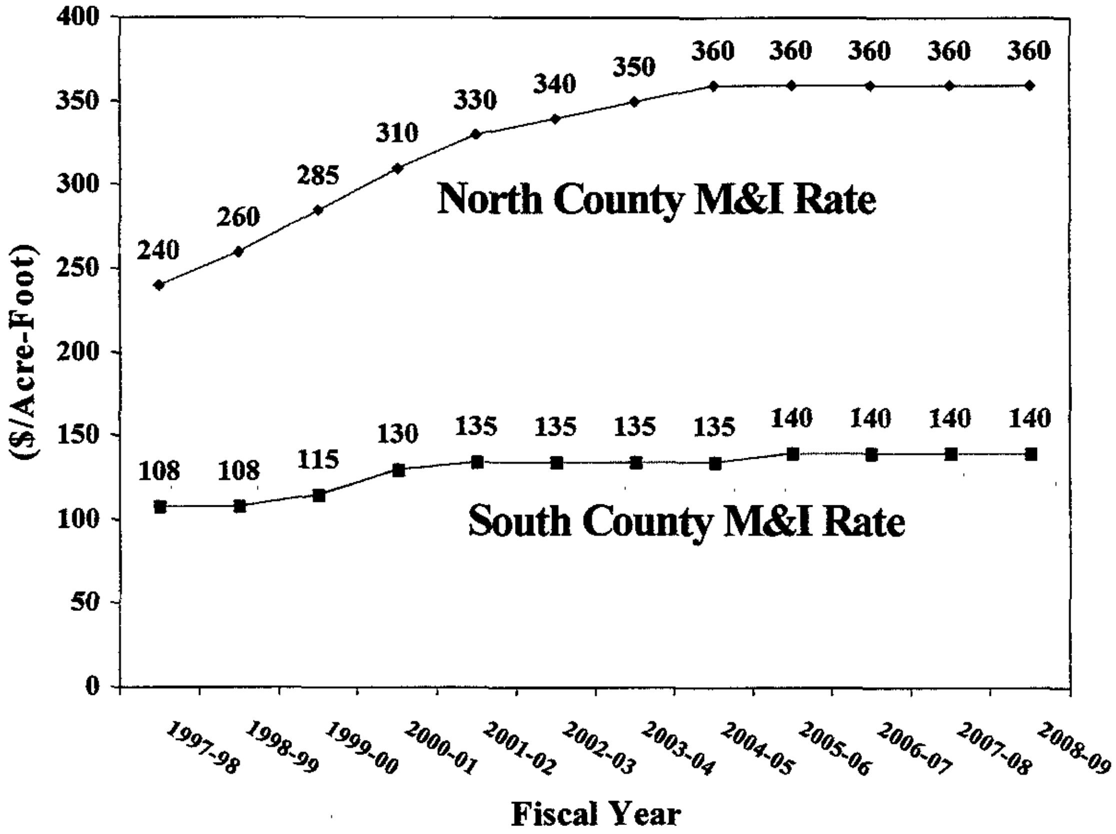


TABLE 4-2
Ten-Year Water Utility Plan
($ in Thousands)

TEN-YEAR WATER UTILITY PLAN
($ in Thousands)

	Actual	Adjusted Budget	Adopted Budget	Adopted Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Revenue Sources:	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Operating Revnue												
Groundwater Charges	$28,044	$36,045	$37,100	$41,458	$45,106	$47,115	$49,516	$51,975	$52,360	$52,250	$52,860	$52,750
Surface/reclaimed Water Sales	$243	$166	$182	$196	$207	$211	$217	$222	$223	$223	$223	$223
Treated Water Charges	$34,662	$37,730	$41,475	$45,330	$50,240	$53,850	$56,010	$58,650	$59,530	$60,410	$61,730	$62,610
Inter-governmental services	$2,210	$1,106	$700	$700	$351	$358	$366	$374	$382	$391	$400	$409
Total Operating Revenue	$65,159	$75,047	$79,457	$87,684	$95,904	$101,534	$106,109	$111,221	$112,495	$113,274	$115,213	$115,992
Non-Operating Income												
Property Taxes	$19,399	$19,021	$21,569	$22,187	$22,521	$22,157	$22,510	$22,882	$23,284	$22,851	$23,244	$23,650
Interest	$8,410	$6,800	$6,499	$4,509	$1,723	$2,172	$1,783	$1,707	$1,693	$2,066	$2,452	$2,702
Capital Contributions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$435	$401	$251	$251	$165	$165	$165	$165	$165	$165	$165	$165
Total Non-Operating Income	$28,243	$26,222	$28,319	$26,947	$24,409	$24,494	$24,458	$24,754	$25,142	$25,082	$25,861	$26,517
Total Revenue	**$93,402**	**$101,268**	**$107,776**	**$114,631**	**$120,313**	**$126,028**	**$130,567**	**$135,975**	**$137,637**	**$138,356**	**$141,074**	**$142,509**
Operating Outlays:												
Operations	$54,310	$84,062	$68,622	$70,657	$86,068	$88,030	$91,792	$94,088	$96,306	$94,976	$97,081	$99,110
Operating Projects	$2,114	$3,785	$5,214	$5,478	$2,040	$1,581	$2,329	$902	$929	$957	$532	$548
Debt Service	$10,941	$10,890	$10,992	$16,422	$21,950	$24,799	$22,446	$16,122	$16,154	$15,338	$15,337	$15,337
Total Operating Outlays	**$67,365**	**$98,737**	**$84,828**	**$92,557**	**$110,058**	**$114,410**	**$116,567**	**$111,112**	**$113,389**	**$111,271**	**$112,950**	**$114,995**
Excess (Deficit) Revenues vs Operating O	$26,037	$2,531	$22,948	$22,074	$10,255	$11,618	$14,000	$24,863	$24,248	$27,085	$28,124	$27,514
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reser	**$26,037**	**$2,531**	**$22,948**	**$22,074**	**$10,255**	**$11,618**	**$14,000**	**$24,863**	**$24,248**	**$27,085**	**$28,124**	**$27,514**
Total Capital Appropriations	**$14,661**	**$18,970**	**$78,129**	**$77,018**	**$27,111**	**$8,498**	**$12,939**	**$17,955**	**$18,400**	**$19,378**	**$21,758**	**$27,197**
Other Financing Sources/ (Uses):												
Revenue Bond Proceeds	$6	$0	$63,769	$63,769	$40,995	$0	$6,592	$0	$0	$0	$0	$0
Payment to Central Valley Project	$0	$0	$0	($89,777)	($10,000)	($10,000)	($9,000)	($9,223)	$0	$0	$0	$0
Total Other Financing Sources/ (Uses)	**$6**	**$0**	**$63,769**	**($26,008)**	**$30,995**	**($10,000)**	**($2,408)**	**($9,223)**	**$0**	**$0**	**$0**	**$0**
Budget Balance Available	**11,382**	**(16,438)**	**8,588**	**(80,952)**	**14,139**	**(6,880)**	**(1,347)**	**(2,315)**	**5,848**	**7.707**	**6,366**	**317**
Projected Carryover		2,000										
Balance Avaliable	**11,382**	**(14,438)**	**8,588**	**(80,952)**	**14,139**	**(6,880)**	**(1,347)**	**(2,315)**	**5,848**	**7,707**	**6,366**	**317**
Appropriated to/(from) Reserves:												
Operating Reserves:												
Contingency Appropriation	$1,000	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Working Capital Appropriation	$6,739	$7,832	$7,069	$7,713	$8,988	$9,410	$9,589	$9,134	$9,321	$9,212	$9,352	$9,523
Supplemental Water Supply Appropo	$19,500	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625
Rate Stablization Reserve Fund	$1,000	$1,000	$1,000	$1,500	$2,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,308	$2,308	$2,308	$2,150	$2,150	$2,150	$2,150	$2,150	$2,150	$2,150	$2,150	$2,150
Total Operating Reserves	**$30,547**	**$19,765**	**$20,002**	**$20,988**	**$22,763**	**$24,185**	**$25,364**	**$24,909**	**$25,096**	**$24,987**	**$25,127**	**$25,298**
Capital Reserves:												
Replacement Appropriation	$5,905	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Designated for Future Years' Capital	$28,361	$19,109	$17,461	$5,300	$3,780	$3,976	$6,836	$4,976	$10,637	$18,453	$24,679	$24,825
Construction Reserves	$0	$0	$0	$0	$13,884	$5,386	$0	$0	$0	$0	$0	$0
Total Capital Reserves	**$34,266**	**$19,109**	**$17,461**	**$5,300**	**$17,664**	**$9,362**	**$6,836**	**$4,976**	**$10,637**	**$18,453**	**$24,679**	**$24,825**
Reserves for Contingent Liabilities:												
Bureau Repayment Appropriation	$48,277	$59,777	$69,777	$0	$0	$0	$0	$0	$0	$0	$0	$0
'otal Reserves for Contingent Liabilities	**$48,277**	**$59,777**	**$69,777**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Appropriated to /(from) Reserves	**$113,090**	**$98,651**	**$107,240**	**$26,288**	**$40,427**	**$33,547**	**$32,200**	**$29,885**	**$35,733**	**$43,440**	**$49,806**	**$50,123**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of the Water Utility's revenue. The groundwater charges for fiscal year 1998-99, adopted by the Board on May 26, 1998, are $260 per acre-foot for nonagricultural (M&I) water and $26 per acre-foot for agricultural water. After holding the rates constant for 5 years, the Board, for the reasons discussed above, decided that the groundwater charge for North County should be raised gradually to meet the anticipated higher financial requirements. Adhering to the approach presented in May 1998, the Board adopted a rate of $285 per acre-foot for nonagricultural (M&I) water and $28.50 per acre-foot for agricultural water for fiscal year 1999-00.

The adopted rates for 1999-00 are projected to increase North County revenues by approximately 6 percent from estimated revenue in 1998-99 as shown in Table 4-3. Fiscal year 1999-00 is projected to experience 40 percent increase in expenditures mainly due to the capital investments in the District's three water treatment plants. The expenditure projection illustrated in Figure 4-1 shows the continuation of this planned financial expansion over the next 6 years and beyond.

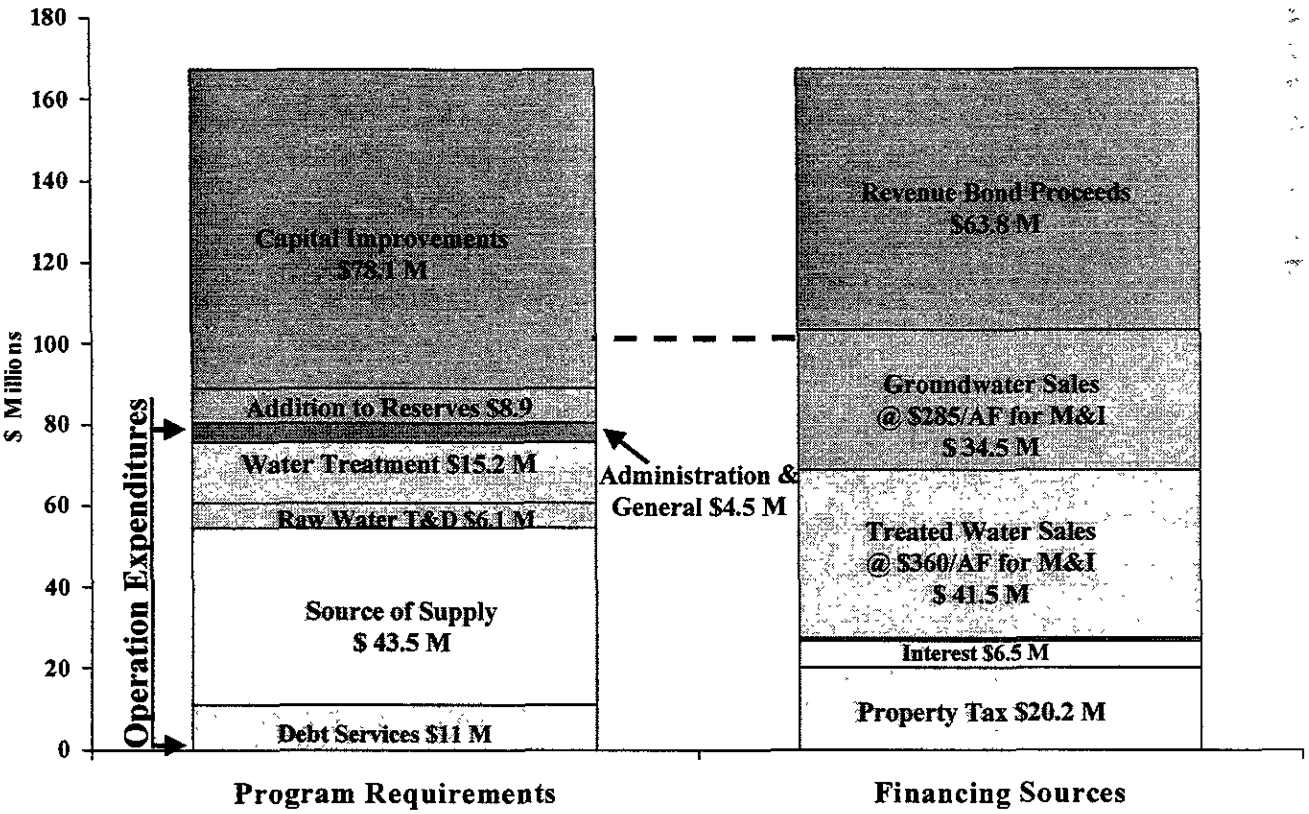
TABLE 4-3
Overview of North County Finances
($ Million)

	Actual 1997-98	**Estimated 1998-99**	**Adopted Budget 1999-00**
Allocated Revenue	89.58	97.35	103.50
Revenue Bonds	0.01	0.00	63.77
Less Open Space Credit to South	(0.43)	(0.44)	(0.49)
Agriculture	0.56	0.56	0.56
Capital Amortization From South County			
Allocated Costs			
Operation	48.65	70.46	61.27
Imported Water	15.37	23.41	19.02
Capital Improvements	14.66	18.97	78.13
CVP Repayment	0.00	0.00	0.00
Total Cost	78.68	112.84	158.42
North County Surplus (Deficit)	11.04	(15.37)	8.92

The groundwater charges adopted by the Board for fiscal year 1999-00 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to provide a healthy, potable water supply in this zone.

FIGURE 4-3
Fiscal Year 1999-00
North County Water Utility Program Requirements and Financing Sources



SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur, but rates are adjusted only when the trend in the cumulative surplus or deficit shows a significant imbalance.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. The current Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in

July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-4, the Open Space Credit received by the South County was $430,000 in 1997-98, estimated at $440,000 in 1998-99, and projected to be $490,000 in 1999-00. As the M&I rates for both zones are projected to grow in the next 6 years, so will the amount of the Open Space Credit available to support agricultural water revenues.

With the adopted rates in fiscal year 1998-99, the South County deficit is estimated to reach approximately *$1 million* (see Table 4-4). This would reverse the financial trend in the South County from a cumulative surplus of $860,000 at the end of 1997-98 to a cumulative deficit of $210,000 estimated at the end of 1998-99. To stem further growth of the cumulative deficit in this zone, an increase in water charges for South County to $115 per acre-foot for nonagricultural water and $11.50 per acre-foot for agricultural water were adopted for 1999-00.

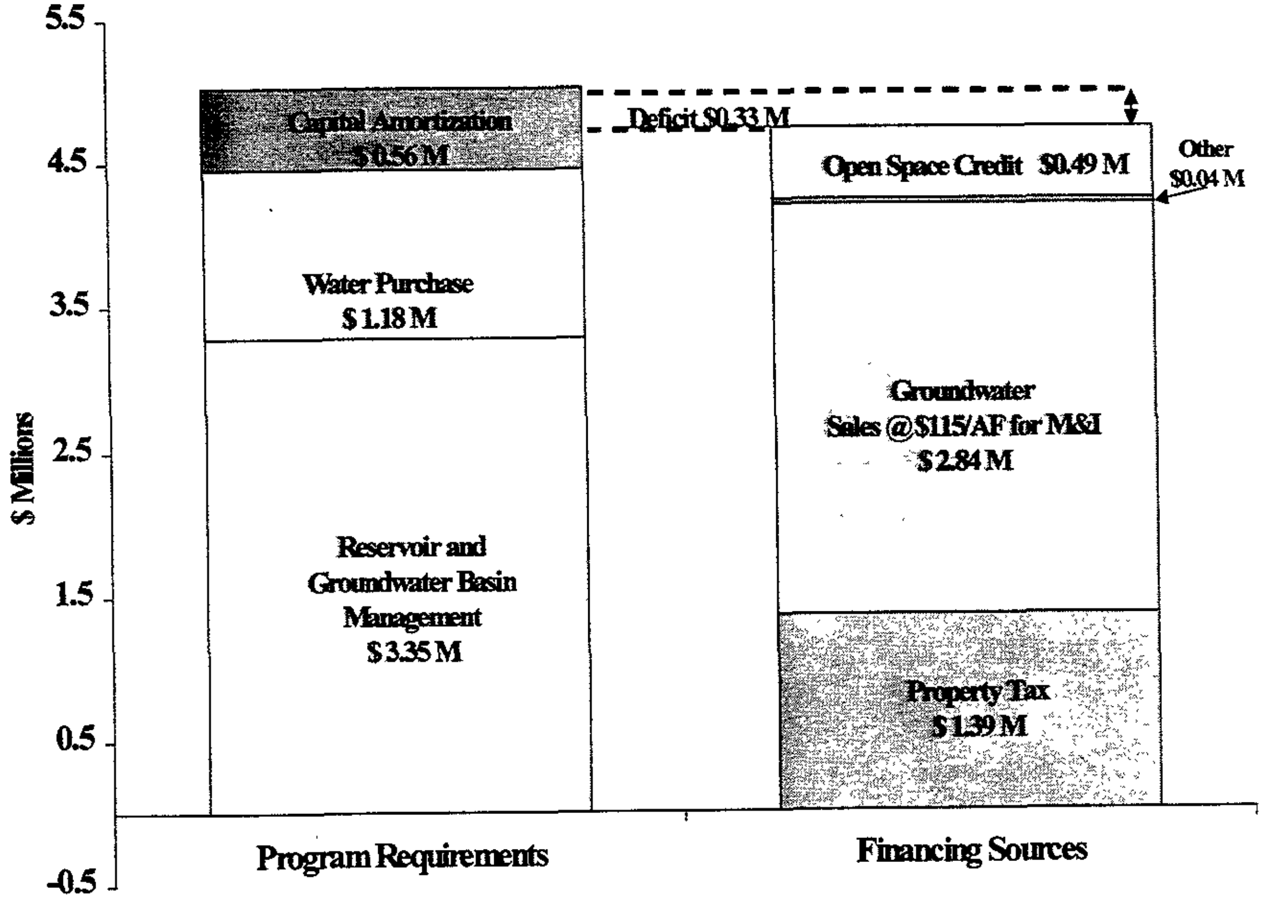
Although the actual projected quantity of imported water to South County has decreased from an average of 12,000 acre-feet to 9,000 acre-feet, the financial estimation for 1998-99 and projection for 1999-00 shows costs for imported water increasing as the District plans to pay or set aside sufficient funds to eliminate the CVP deficit balance. The projected CVP costs in South County are complicated by uncertainty in the future use of imported water in the San Pedro Recharge Ponds. Recent successive wet years have led to high groundwater levels, which are causing problems for some property owners in South County. The District is analyzing approaches to monitoring the movement of groundwater and is expanding its monitoring network to better understand the underground aquifers in the South County.

Figure 4-4 shows the relationship between expenditures and projected sources of revenue in Zone W-5.

TABLE 4-4
Overview of South County Finances
($ Million)

	Actual 1997-98	**Estimated 1998-99**	**Adopted Budget 1999-00**
Allocated Revenue	3.82	3.92	4.28
Received Open Space Credit From North County	0.43	0.44	0.49
Allocated Costs			
Operation	2.36	3.28	3.35
Imported Water	0.99	1.59	1.18
Amortized Capital Improvements	0.56	0.56	0.56
TOTAL COST	3.91	5.43	5.10
Surplus (Deficit)	0.34	(1.07)	(0.33)
Cumulative Balance	0.86	(0.21)	(0.55)

FIGURE 4-4
Fiscal Year 1999-00
South County Water Utility Program Requirements and Financing Sources



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APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 1999-00

Component	Rate (AF)
Basic User, Zone W-2	
Agricultural	28.50
M&I	285.00
Basic User, Zone W-5	
Agricultural	11.50
M&I	115.00
Treated Water Surcharge	
Contract	70.00
Noncontract*	0.00
Water Master	11.75
Capital Cost	
Half Road Lateral System	2.75

*Note: Noncontract water is available only from the Rinconada Water Treatment Plant in 1998-99, and this is the recommendation for 1999-00.

TABLE A-2
Adopted Water Charges for Fiscal Year 1999-00

Type of Charge	AG Water (AF)	M&I Water (AF)
Groundwater		
Zone W-2	$28.50	$285.00
Zone W-5	11.50	115.00
Surface Water[1]		
Evergreen Deliveries[2]	228.00	N/A
Half Road Deliveries[3]	26.00	129.50
Other Zone W-5 Deliveries[4]	23.25	126.75
Other Zone W-2 Deliveries[5]	40.25	296.75
Minimum Charge Zone W-5[6]	86.25	86.25
Minimum Charge Zone W-2[7]	213.75	213.75
Stored Water		
Zone W-2	28.50	28.50
Zone W-5	11.50	11.50
Treated Water[8]		
Contract	N/A	355.00
Noncontract	N/A	285.00
Recycled Water		
Gilroy	20.00	80.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2] Evergreen agricultural delivery charges for 1992 through 1999 equal the 1988-89 rate ($72.00/AF) plus 50 percent of the City of San Jose's wheeling charge. The District no longer delivers M&I water to the Evergreen Area.

[3] Half Road = Basic User (AG or M&I @ $11.50 or $115.00) + Water Master ($11.75) + Capital ($2.75).

[4] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $11.50 or $115.00) + Water Master ($11.75).

[5] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $28.50 or $285.00) + Water Master ($11.75).

[6] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $115.00).

[7] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $285.00).

[8] Treated Water Charge is the sum of Basic User ($285.00) and Treated Water Surcharge ($70.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.
- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation. In 1992-93, 10 percent of the Water Utility's portion of the 1 percent allocation was reallocated as part of the 1992-93 state budget. It is possible that the Water Utility will be impacted by further state reallocation of the 1 percent ad valorem tax in the future.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State Legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent.

WATER UTILITY RESERVES

1. **Designated for Future Years Capital**: This reserve accounts for the remainder of current available funds (or deficit) and is appropriated in support of future capital needs as projected in the District's 5-Year Capital Improvement Plan.

2. **Contingency Appropriations**: Set at a fixed recommended amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year.

3. **Replacement Appropriations**: Established at recommended levels for the immediate or emergency replacement of water enterprise fixed assets. The prior years appropriated amounts were set at approximately 2 percent of the book value of the Water Enterprise Plant and Equipment. Beginning in fiscal year 1998-99, the 5-Year Capital Improvement Plan has identified needed fixed asset replacements and has eliminated the need for this reserve. The balance of any prior years appropriation have been combined with the appropriation Designated for Future Year Capital.

4. **Working Capital Reserves**: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. In the Water Utility, the level of reserve is set at 1/12 of budgeted operating outlays (required under Water Revenue Bond Resolution 94-58).

5. **San Felipe Appropriation**: This is a contractually stipulated operating reserve pursuant to the District's contract with the Bureau of Reclamation for the operation and maintenance of the San Felipe Division Facilities.

6. **Bureau of Reclamation Repayment Appropriation**: Established by Board policy to provide funding for the District's future contractual liability to the Bureau of Reclamation, CVP.

7. **Supplemental Water Supply Appropriation**: This reserve is established under Board policy to provide funding for supplemental water purchase during period of drought or participation in water banking or conservation opportunities.

8. **Rate Stabilization Reserve Fund**: Established pursuant to the District's Water Revenue Bond Covenants under Resolution 94-58. Amounts accumulated in this reserve may be used to supplement District revenues to meet Debt Service Coverage Requirements during periods of extraordinary operating expense in lieu of a rate increase.

In addition to the foregoing balances held by the District, a debt service reserve fund is held by the District's fiscal agent to meet any deficiencies that may occur in meeting the revenue bond debt service. The amount on deposit is equal to 10 percent of the proceeds from the 1994 refunding or $6,591,500.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 acre-feet of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

RESOLUTION NO. 99- 21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted**:

Policy Statement

The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

- Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.
- Protection of water quality through the purification and treatment of water and the protection of water supplies.
- Stewardship of watersheds and riparian corridor.
- Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- ***Basic Water Charge Zones***: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- ***Treated Water Surcharge***: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- ***Costs for Specific Benefits***: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- ***Balancing Costs***: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- ***Incentives***: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- ***Recycled Water***: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

3. Executive and Staff Limitations

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. Previous Policy Rescinded

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By:
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

Lauren L Keller
Clerk/Board of Directors

EXHIBIT "A"

SANTA CLARA VALLEY WATER DISTRICT BOARD RESOLUTIONS USED AS A BASIS FOR WATER TAXING AND PRICING POLICY

Resolution 68-4 to govern the management of its water supply and water facilities so as to equalize the availability of water throughout the District by every means available to it to the fullest extent consistent with equity and sound conservation principles; and

Resolution 71-19 adopting "Water Taxing and Pricing Policy;" and

Resolution 74-28 adopting rules and regulations for the service of surface water and establishing a fee and charge structure; and

Resolution 79-87 providing for water importation tax credits and repealing prior resolution which was adopted November 23, 1964.

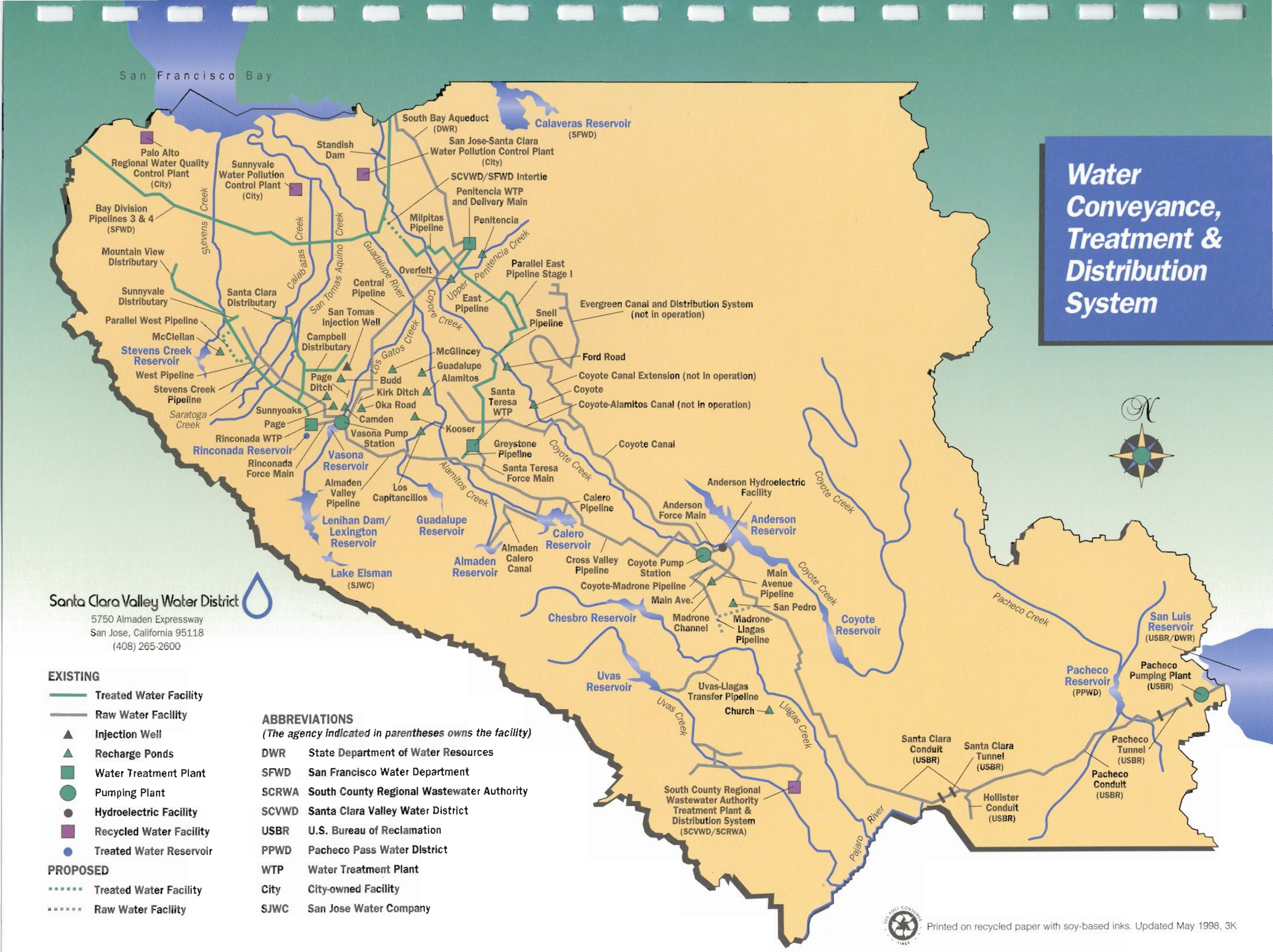
Resolution 81-44 declaring policy regarding payment of in-county credit for ensuing fiscal years and that no unit rate is provided for the in-county credit and no payments made from and after fiscal year 1983-1984.

Resolution 90-73 adopting and authorizing the filing and implementation of the Santa Clara Valley Water District Urban Water Management Plan which provides for water conservation efforts which are funded by the District.

APPENDIX C

MAPS

Water Conveyance, Treatment & Distribution System



Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118
(408) 265-2600

EXISTING

- ━ Treated Water Facility
- ━ Raw Water Facility
- ▲ Injection Well
- ▲ Recharge Ponds
- ■ Water Treatment Plant
- ● Pumping Plant
- ● Hydroelectric Facility
- ■ Recycled Water Facility
- ● Treated Water Reservoir

PROPOSED

- ┅ Treated Water Facility
- ┅ Raw Water Facility

ABBREVIATIONS

(The agency indicated in parentheses owns the facility)

DWR	State Department of Water Resources
SFWD	San Francisco Water Department
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
USBR	U.S. Bureau of Reclamation
PPWD	Pacheco Pass Water District
WTP	Water Treatment Plant
City	City-owned Facility
SJWC	San Jose Water Company

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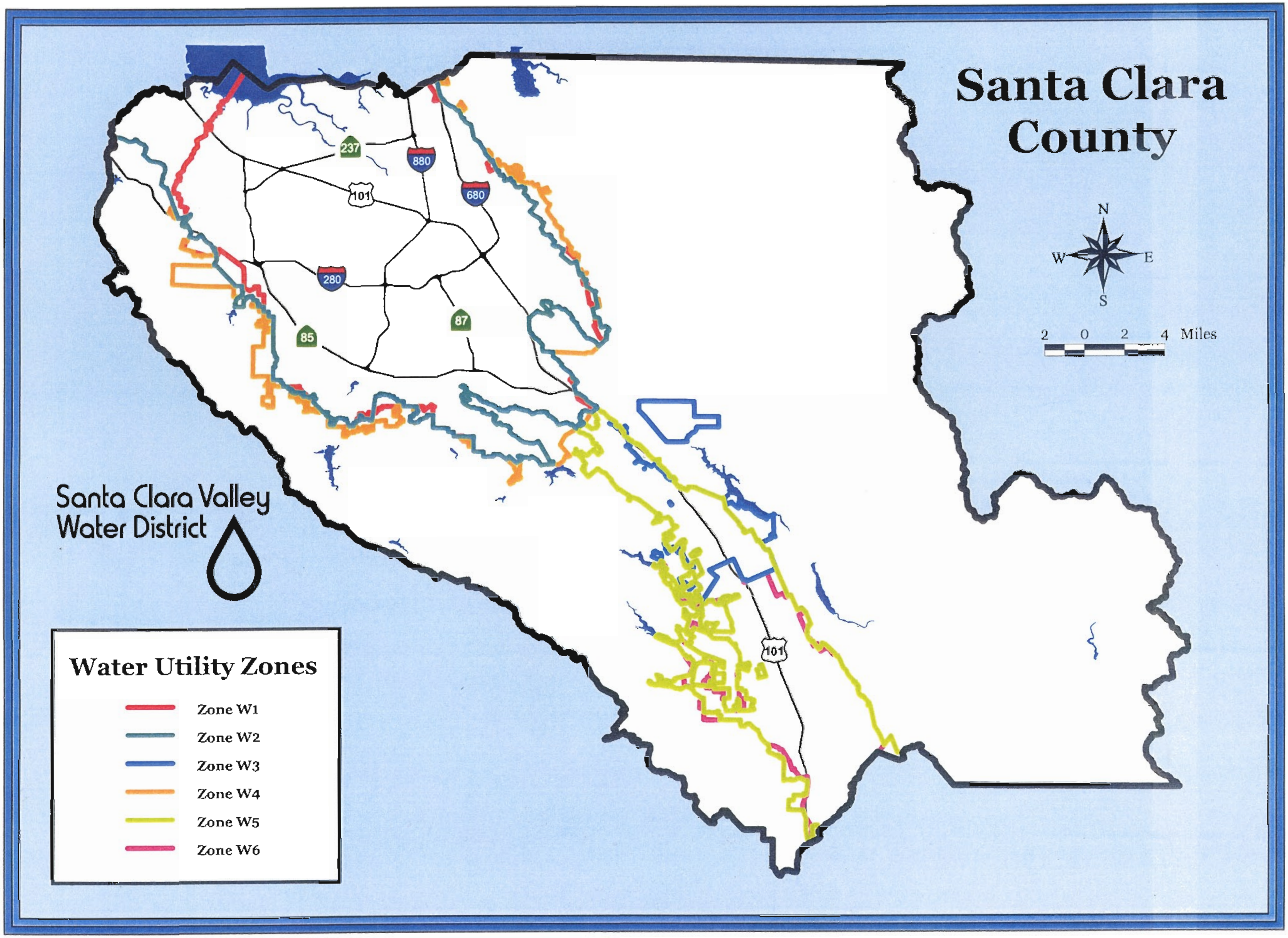

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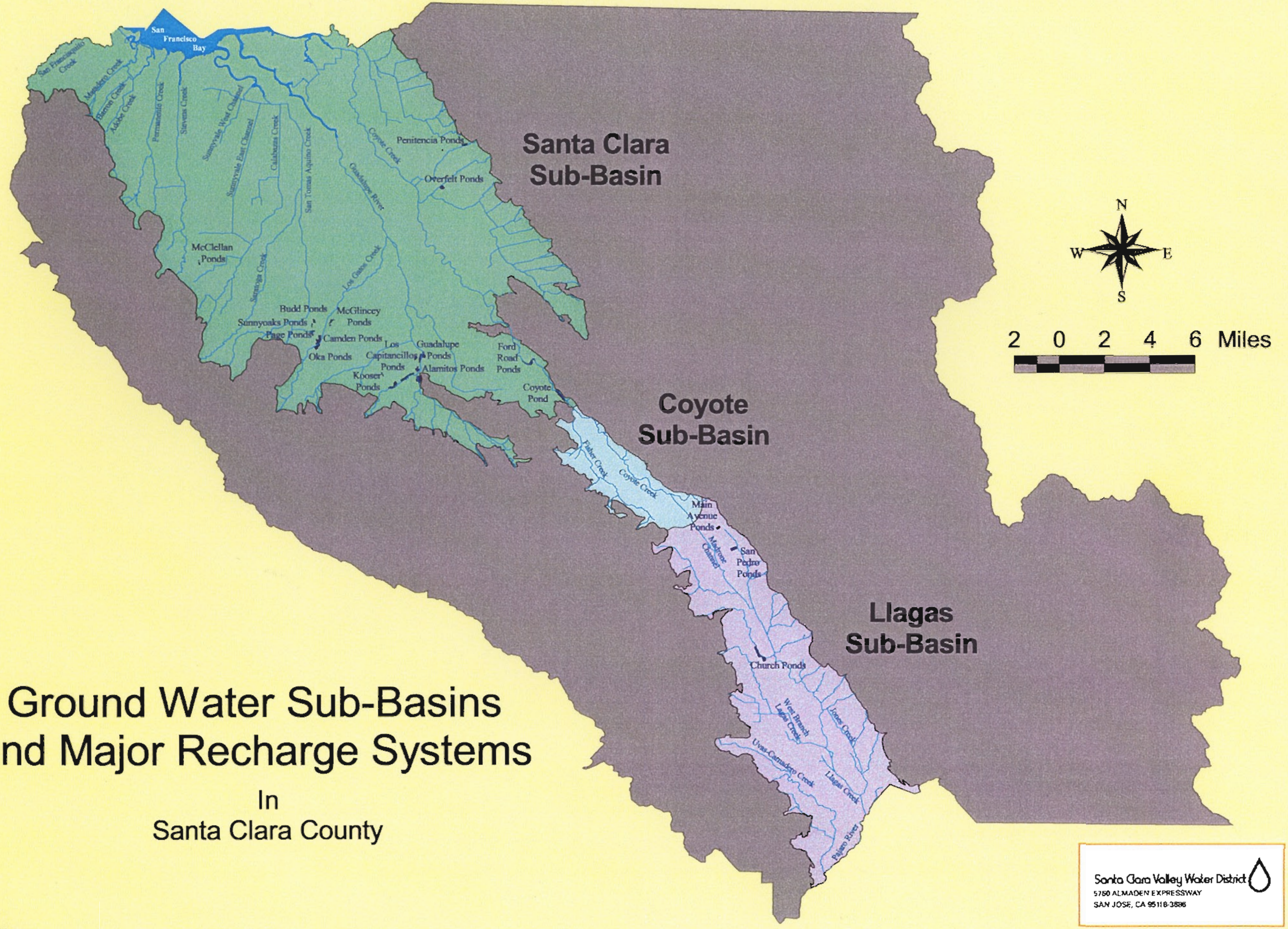

Ground Water Sub-Basins and Major Recharge Systems

In

Santa Clara County

Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686

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